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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/495,897	02/02/2000	Masahiko Saito	29273/521	5434

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EXAMINER

TANG, KENNETH

ART UNIT PAPER NUMBER

2127

DATE MAILED: 04/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/495,897

Applicant(s)

SAITO ET AL.

Examiner

Kenneth Tang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 December 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date g.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. Claims 1-16 are presented for examination.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention:

- a. In claim 1, the terms “translates” and “translation” are indefinite because it is not made explicitly clear whether these terms imply interpreting (to a common language) or changing (by altering the priority).
- b. In claims 6, 7 and 10, the term “translates” is indefinite because it is not made explicitly clear whether these terms imply interpreting (to a common language) or changing (by altering the priority).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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3. Claims 1-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umeno et al. (hereinafter Umeno) (US 5,392,409) in view of Applicant's Admitted Prior Art.

4. As to claim 1, Umeno teaches a computer comprising:

- a memory for storing a plurality of operating systems and a plurality of processes or threads to be performed by each of said operating systems (*see Abstract*); and
- a processor for executing said operating systems in accordance with priorities assigned to said processes or threads (*col. 9, lines 14-15 and lines 38-68*);
- wherein the processor retrieves the priorities of processes or threads to be performed by any one of said operating systems, translates the retrieved priorities into priorities of said plurality of operating systems, selects the operating system to be executed in accordance with the priorities resulting from the translation, and executes the selected operating system (*col. 9, lines 14-15 and lines 38-68, col. 11, lines 46-53, see Fig. 14*).

5. Umeno fails to explicitly teach the translating involve into common priorities. However, the Applicant's Admitted Prior art illustrates that a technique is already known that involves a notification of priority and in response, the execution priority is changed (translated) to comply (or match) with the received priority (*see page 2, 2nd paragraph of the Specification*). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of Unemo and Applicant's Admitted Prior Art because the feature of translating common priorities to the existing system of Unemo would increase the efficiency of execution in Unemo's system (*see page 2, 2nd paragraph of the Specification*).

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6. As to claim 2, Umeno teaches a computer wherein said memory comprises a priority translation table in which to map into the common priorities the priorities of the processes or threads to be performed by said operating systems, and wherein said processor selects the operating system to be executed on the basis of said priority translation table (*col. 9, lines 14-15 and lines 38-68, col. 11, lines 46-53, see Fig. 14*).

7. As to claim 3, Umeno teaches a computer wherein said processor determines priorities specific to each of said plurality of operating systems on the basis of the priorities common to said operating systems, thereby changing the priorities of said plurality of processes or threads to be performed by each of said operating systems (*col. 13, lines 62-68*).

8. As to claim 4, Umeno teaches a computer wherein said memory comprises a priority reverse translation table in which to map said common priorities into the priorities specific to each of said operating systems, and wherein said processor changes the priorities of said plurality of processes or threads on the basis of said priority reverse translation table (*col. 9, lines 14-15 and lines 38-68, col. 11, lines 46-53*). Data in the translation table can be accessed and also modified (bi-directional).

9. As to claim 5, Umeno teaches a computer wherein, if a process or a thread is designated for execution, said processor elevates the priority of the operating system in charge of carrying out the designated process or thread, the processor further lowering the priority of the operating

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system in question when said designated process or thread is terminated in execution (*col. 13, lines 62-68*).

10. As to claim 6, it is rejected for the same reasons as stated in the rejection of claim 1. In addition, Umeno fails to explicitly teach notification of a priority. However, the Applicant's Admitted Prior Art teaches that notifying of a priority is well known. It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the feature of notifying of a priority to the existing system because a response can be made from that notification of priority. Furthermore, Umeno fails to explicitly teach preferentially executing the operating system having a higher common priority. However, it would be obvious to one of ordinary skill in the art that a higher common priority would be more preferred to execute because that is the purpose of having priorities established.

11. As to claim 7, it is rejected for the same reasons as stated in the rejection of claim 6.

12. As to claim 8, Umeno teaches an operating system execution wherein said priority translating step, in translating priorities specific to each of said operating systems into common priorities, translates the priorities of different operating systems into common priorities that differ between said different operating systems (*see Abstract*).

13. As to claim 9, Umeno teaches an operating system execution method wherein said priority translating step, besides translating priorities of processes or threads to be performed by

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each of said operating systems into the common priorities, translates at least an interrupt handling state, a self-processing state of any operating system, and an idle state into common priorities (*col. 25, claim 3*).

14. As to claim 10, it is rejected for the same reasons as stated in the rejection of claim 10. In addition, Umeno does teach running one of a plurality of operating systems based on priority (see rejection of claim 10) but fails to explicitly teach switching. However, it would be obvious to one of ordinary skill in the art that switching would occur when a different operating system of the group is picked based on a new higher priority.

15. As to claim 11, it is rejected for the same reasons as stated in the rejection of claim 3.

16. As to claim 12, it is rejected for the same reasons as stated in the rejection of claim 4.

17. As to claim 13, it is rejected for the same reasons as stated in the rejection of claim 9.

18. As to claims 14-16, they are rejected for the same reasons as stated in the rejection of claim 5.

Conclusion

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kenneth Tang whose telephone number is (703) 305-5334. The examiner can normally be reached on 8:30AM - 7:00PM, Monday through Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (703) 305-9678. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kt
4/16/04


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